

REMARKS/ARGUMENTS

Favorable reconsideration of this application in view of the above amendments and following remarks is respectfully requested.

Claims 9-14 and 17-28 are pending in this application. By this amendment, Claim 9 is amended; Claim 15 is canceled; and no claims are added herewith. It is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, Claims 9-15 and 17-28 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 3,830,261 to Hochberg in view of U.S. Patent No. 5,813,704 to Naito.

It is respectfully submitted that the applied art does not teach or suggest a bellows composed of a thin metal and having troughs and ridges, a buffer material covering the outer face of the bellows, and the buffer material covers the outer face from the bottom of the troughs to a height that is 0.5 to 2.0 times the height of the ridges, wherein the cross section of the bellows has a sequence of one of U shapes and Ω shapes, as recited in Claim 9.

Instead, Hochberg discloses as shown in Fig. 3, a tube 20 in the form of a body of a fuel line having a hollow interior defined by a hollow core. The tube 20 is surrounded by a layer 22 of a foam material. As taught by Hochberg, the foam material should be flexible and should be of a closed cell variety to prevent it from absorbing fuel. The foam material 22 should be thick enough to accommodate petalling of the tube 20. A layer 24 of sealant surrounds the foam material 22 and an overwrap 26 serves to maintain the sealant layer 24 in place.

Naito discusses the flexible joint shown in Figs. 1 and 2, which includes a braid 2 and protectors 3a, 3b on a lateral side surface 11a of the ridge part 11 at both end parts of the wave-shaped bellows 1. The protector 3a and the braid 2 are fixed by spot-welding W1. The other protector 3b is integrally fixed by spot-welding W2. Since the first end part 2a of the

braid 2 at the side of the protector 3a is tightly fixed to the protector 3a by means of spot-welding W1, the tensile force of the braid 2 can be adjusted. Therefore, the spring constant of the flexible joint can be set at a desired value. Thus, the covering can be effected in the state of the braid 2 being in close contact with the ridge part of the bellows 1.

The Office Action acknowledges that Hochberg does not teach the claimed shape of the bellows. However, the Office Action asserts that it would have been obvious to modify the tube 20 of Hochberg to include the shaped bellows of Naito. Applicants disagree. In particular, there is no teaching or suggestion for modifying Hochberg as asserted in the Office Action. The object of Hochberg is to have a lightweight hollow body which seals itself after being penetrated by a foreign object. Therefore, an object of the Hochberg invention is to provide a self-sealing hollow body which experiences minimal amount of petalling upon being penetrated by a projectile. For example, layer 22 of foam material is provided that should have structural integrity and also capable of absorbing impacts, such as from a bullet penetrating the hollow body. If the tube 20 was shaped with a cross section having a sequence of U shapes or Ω shapes as claimed, bullets that entered the area between adjacent troughs would travel unimpeded to sealant layer 24 and would not enter layer 22 made of foam material which is provided to absorb impacts. As a result, the device of Hochberg would be rendered unsatisfactory for its intended purpose.

The outstanding Office Action acknowledges that Hochberg fails to disclose the degree to which the buffer material will cover the outer face of the bellows with respect to the bottom of the troughs to a specific height with respect to the ridge. Applicants submit that Naito similarly does not suggest a buffer material located on the outer face of the bellows and therefore does not recognize the advantages thereof. That is, Naito merely discusses a braid 2 located above the bellows 1. With the spot-welding, the tensile force of the braid 2 can be adjusted. There is no teaching for a material to be provided in the troughs of the bellows 1.

The outstanding Office Action asserts that it would have been obvious to one of skill in the art to apply a foam material to the bellows with troughs and ridges that would cover the bellows from the bottom of the troughs to the ridges, and that such a feature is a result effective variable and involves only routine skill in the art. However, as discussed above, the applied art is silent as to the teaching of a buffer material in the troughs of U shaped or Ω shaped bellows. None of the applied art recognizes that this feature is a result-effective variable. As discussed in MPEP § 2144.05(II), a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of the variable might be characterized as routine experimentation. Please see *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

In one or more embodiments of the invention, since the outer face of the bellows of the vibration-absorbing tube is covered (filled) with the buffer material from the bottom of the troughs to a height that is 0.5 to 2.0 times the height of the ridges, the bellows exhibits improved vibration absorbency. Consequently, the vibration-absorbing tube can absorb vibration with a broader frequency spectrum and higher energy intensity.

The features of the claimed invention are not taught or suggested in the applied art, and therefore, the applied art cannot provide at least the advantages discussed above. Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) is respectfully requested.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

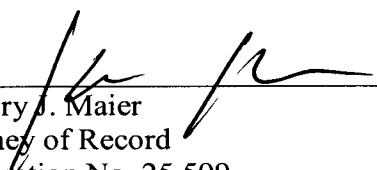
Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Kevin M. McKinley
Registration No. 43,794